



# DIGIPOWER 4x150T/02 POWER AMPLIFIER MANUAL



Designed and Manufactured by  
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 **ITEC**  
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### Dear Customer!

The power amplifiers of the series “ITEC DigiPower” offer due to the latest digital technology in place an extremely high efficiency. Another feature is the very low power consumption in the automatic standby mode. Therefore “ITEC DigiPower amplifiers” are ideal for the use in voice alarm systems. For this application alternatively to the standard 230V AC power supply a supply from a 24V DC backup battery can be provided.

LEDs on the front panel show the proper function of the power amplifier and the power supplies. This information can be passed on to higher-order control and fault indication systems via floating relay contacts.

ITEC DigiPower amplifiers are very robust and reliable. They are designed for a continuous operation in professional sound reinforcement systems. Dynamic limiters provide an effective overload protection and avoid distortion or damages of the speaker systems. Short-circuit and over temperature protection ensure a maximum operational safety. Various practical details and the convenient, streamlined design facilitate installation and operation.

Please read this instruction manual carefully and observe all instructions in particular those safeties related to ensure a long lasting and trouble-free operation.

We are happy to assist you in any other questions concerning sound, voice alarm, security, sound, speech technology, media remote control, conference room facilities, etc.

Your ITEC acoustics team

### ITEC DigiPower 4x150T/02 – Features

- LED indicators for signal and operating conditions
- Potential-free monitoring outputs for battery and mains supply
- Potential-free monitoring outputs for the function of the power amplifier
- Low installation depth of only 280 mm
- Low construction height: 2 RUs for 4 channels, output transformer on board
- All ports with push/screw terminals
- Symmetrical signal inputs
- Automatic standby with lowest possible current drain in 24V DC operation
- Protection circuit against open-circuit operation, short circuits, excessive temperature, DC
- 230 VAC network and 24 VDC voltage supply
- Soft start, cascadeable switch-on delay when using several devices
- Temperature-controlled fan
- RS485 interface (optional) to control and query important parameters

### Safety instructions

Please read this instruction manual carefully before installation and putting the “ITEC DigiPower” amplifier into operation. Keep this document easy to find on a safe place to have it available as a later reference.

Instruct all persons dealing with this device and make them familiar with its use and in particular with the safety regulations.

When installing the device, local connection conditions, required protective measures and all relevant standards must be observed.

Do not block, cover or obstruct the vent slots: The air circulation has to remain ensured.

The device is designed for installations in 19“ cabinets / racks / frame / housing. Improper installations in furniture, cabinets or distribution systems as well as a free putting have to be avoided.

Operate the device only via a grounded safety power outlet. Make sure the power cable is not damaged. Never remove the ground wire of the feeder.

Before connecting to the mains supply check that the data on the backside of the device match with the local network.

The device must necessarily be checked by trained personnel in case:

The power cable or plug are damaged, small objects or liquids got into the device, the device operates in a different way than usual, the device was exposed to a severe impact or the housing has been damaged.

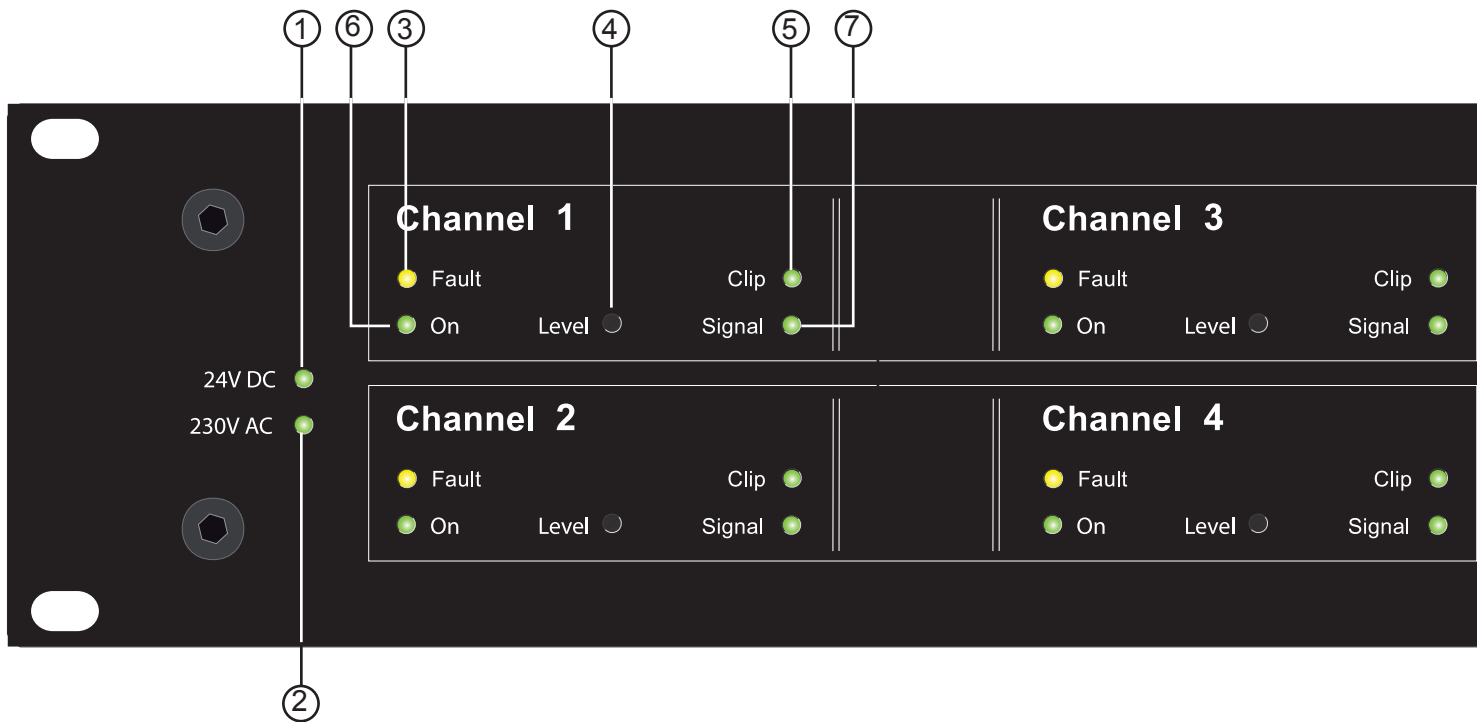
Extended storage or operating in rooms with high humidity, during rain or under the influence of splash water can lead to damages or malfunctions.

Do not apply temperatures above 50 °C, humidity larger than 95% or rain to the device.

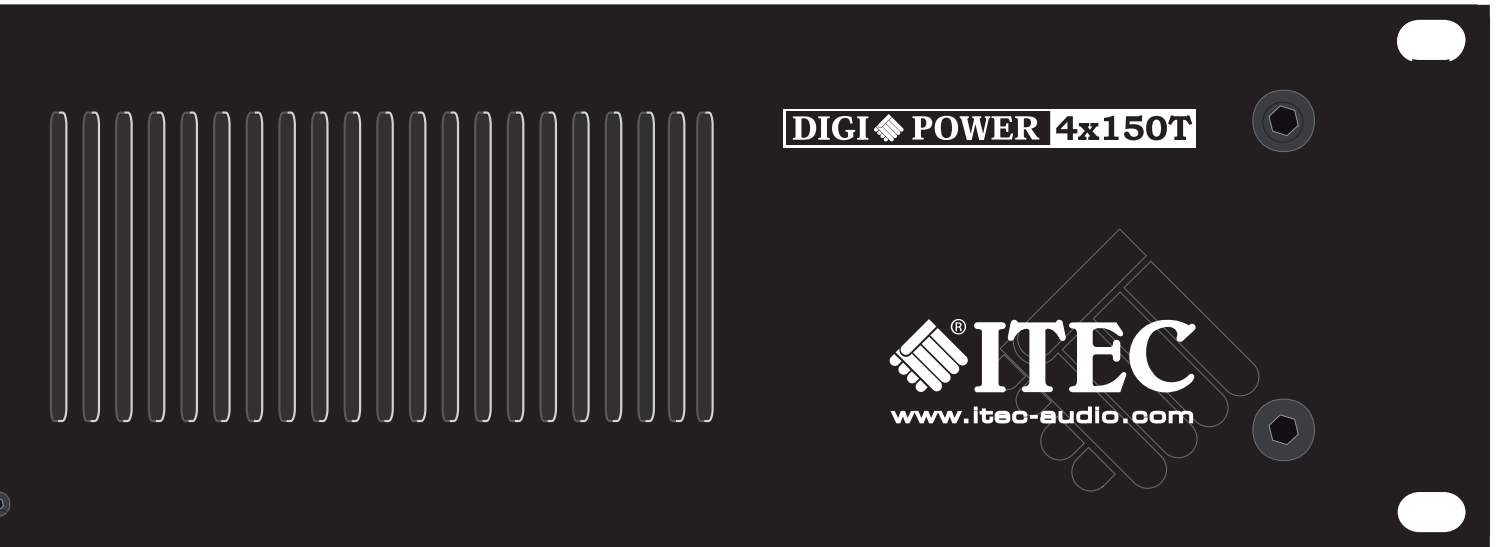
Never try to open the device by force or by unscrewing. The product does not contain parts that can be repaired by amateurs. Please contact the manufacturer or a local distributor.

For cleaning use a soft, dry cloth only. Never use cleaning agents or solvents which attack the surface or could enter the device. Unplug the device before cleaning.

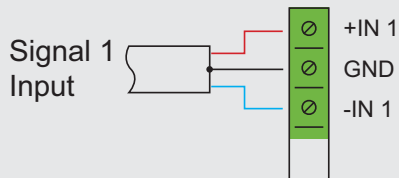
NOTE: Before carrying out any modifications of the device by a specialist, the device has to be disconnected both from the mains supply as well as from the 24V DC power supply.



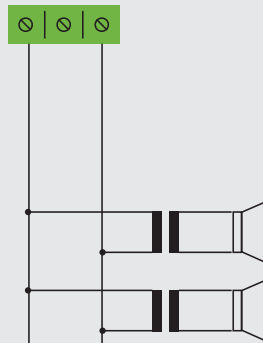
1. 24V DC: indicates that 24V DC power is applied.
2. 230V AC: indicates that the applied voltage is 230V AC. The device is supplied by this voltage - the 24V DC remains unloaded.
3. Channel 1 Fault: indicates a fault, e.g.: thermal overload at channel 1  
During normal operation this LED flashes shortly after powering up until the protection mode is terminated and the speaker output is enabled.
4. Channel 1 Level: Channel 1 volume control knob can be operated with a little screw driver
5. Channel 1 Clip: indicates an excessive input signal and the activation of the built-in limiter to prevent a clipping of the signal
6. Channel 1 On: shows that channel 1 is active. This is always the case when using 230V AV power supply. When using emergency power supply, meaning 24V DC supply, the power amplifier automatically switches to the power-efficient standby mode when it doesn't receive an input signal and the LED goes out. In case it receives an input signal >-45dB, the power amplifier switches to operation mode and the LED shows the active state.
7. Channel 1 Signal: indicates that the signal is > 30dB.



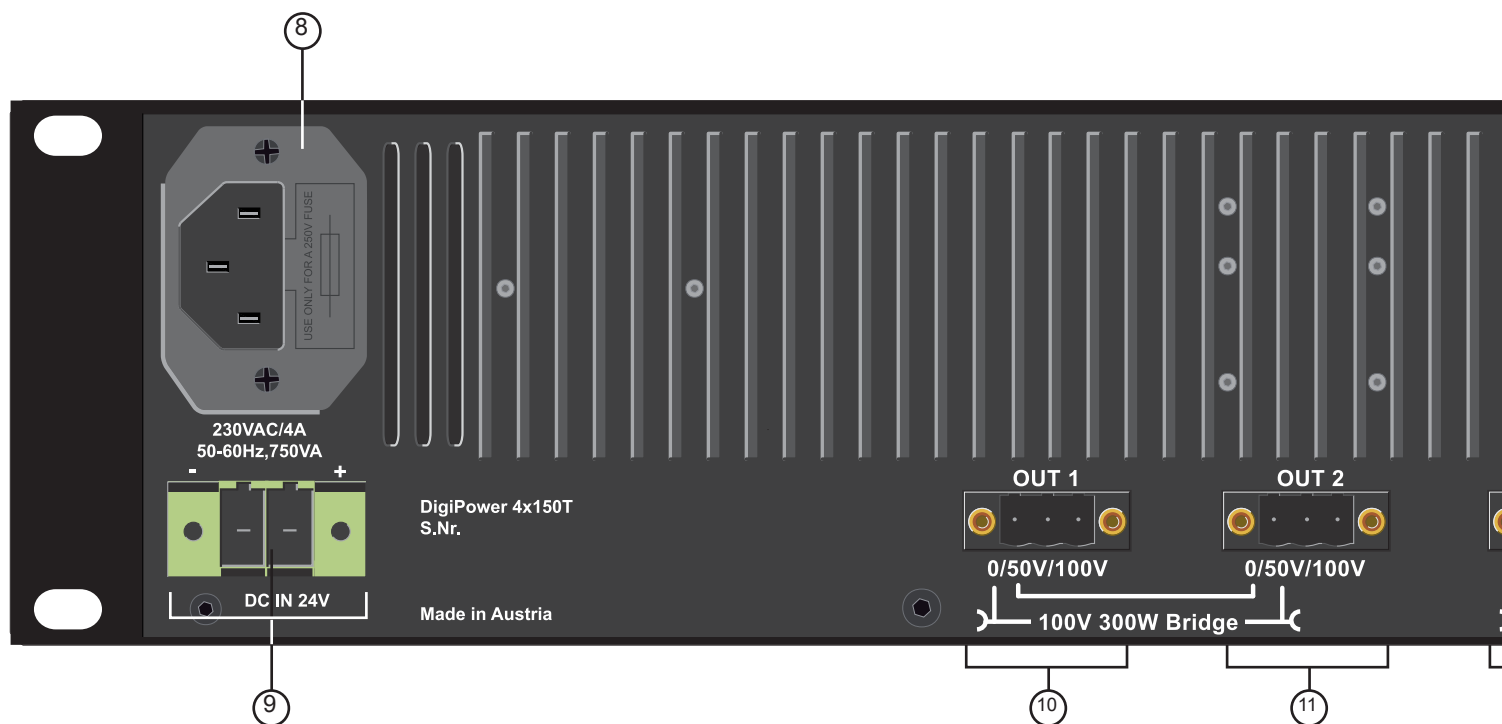
### Connection example Channel 1



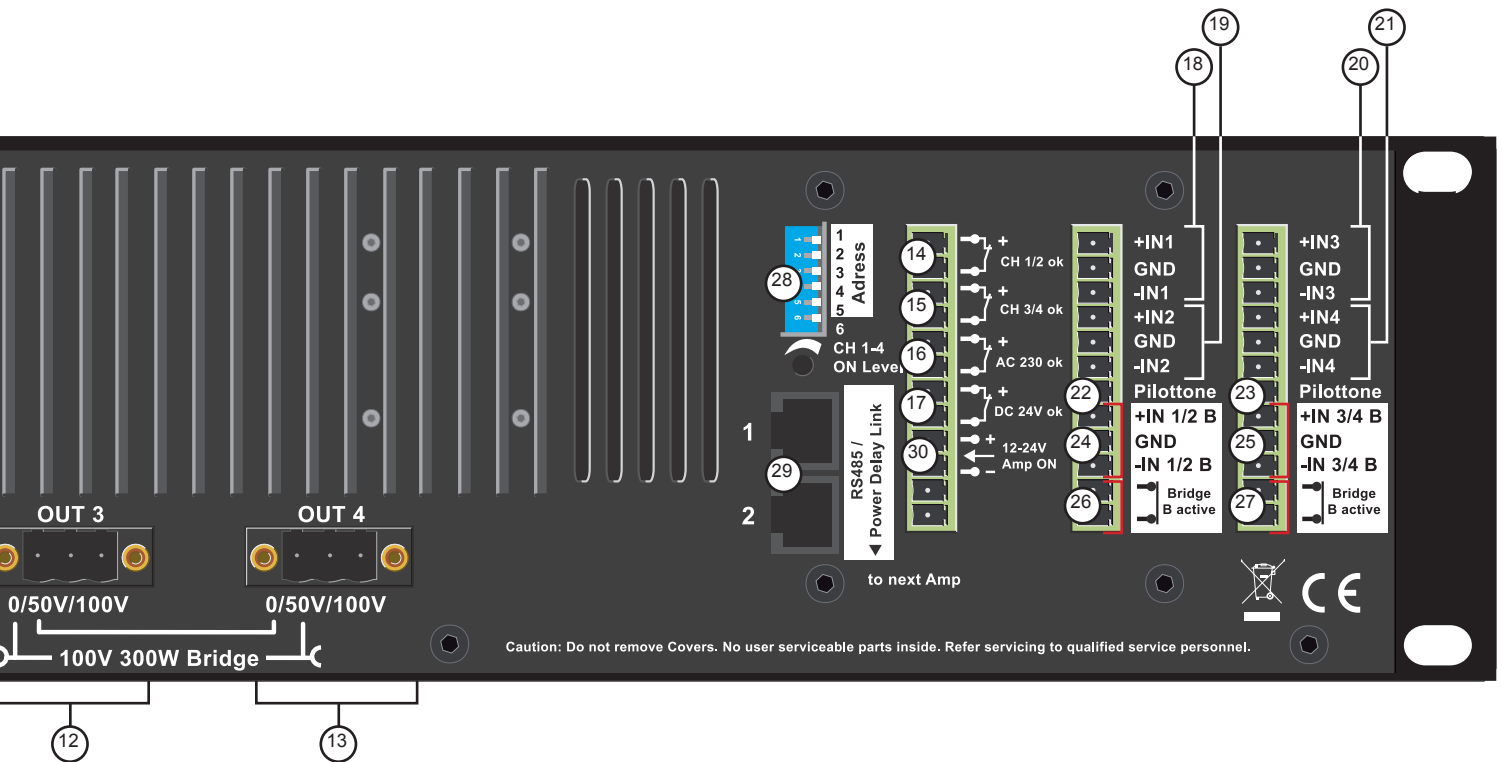
OUT 1  
0/50V/100V



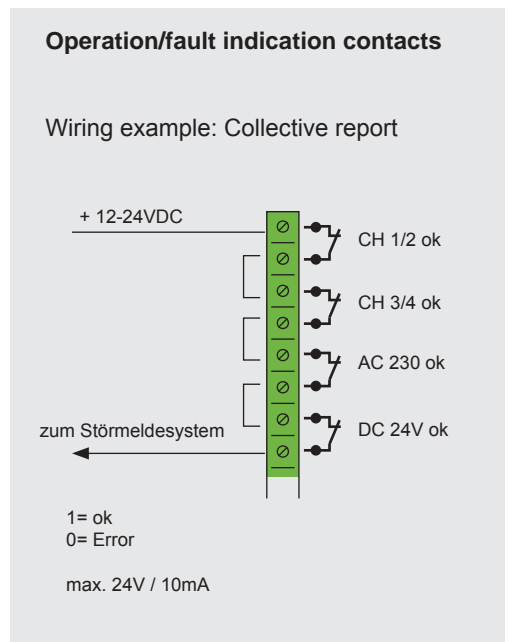
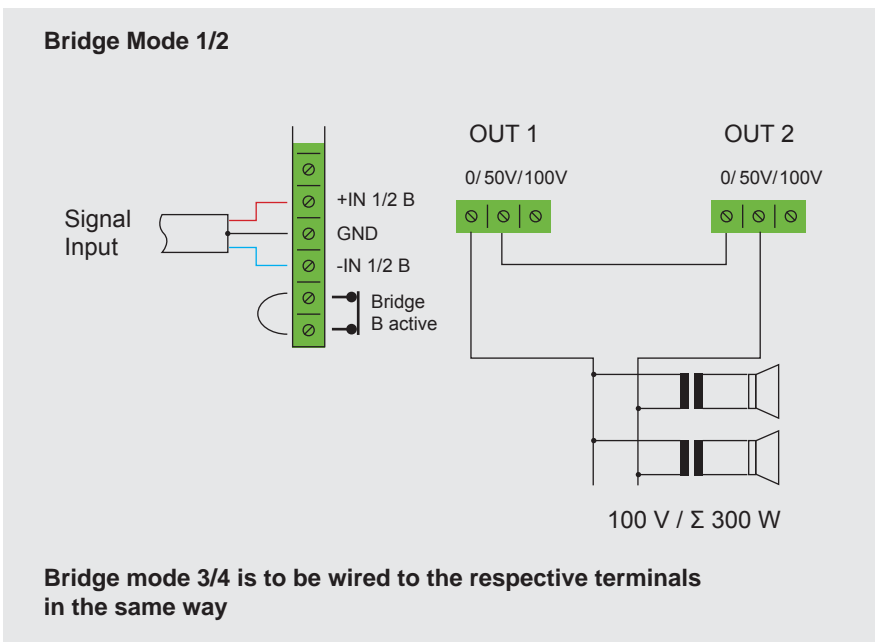
100 V /  $\Sigma$  150 W / 66  $\Omega$   
(50 V / 16  $\Omega$ )



- 8. 230VAC: The power cord is plugged in to the panel connector containing an integrated fuse (6A). The device becomes active, when a voltage of 230V AC is applied
- 9. DC IN 24V: The 24V DC power supply is connected to the terminal block. In case of a breakdown of the 230 V supply a switch to the 24V DC supply is carried out without interruption. As long as a supply via 230V AC is made the power consumption at the 24V DC input is kept at a minimum level (10mA for measurements).
- 10. OUT1: Power output chanel 1 (Common / 50V / 100V)
- 11. OUT2: Power output chanel 2 (Common / 50V / 100V)
- 12. OUT3: Power output chanel 3 (Common / 50V / 100V)
- 13. OUT4: Power output chanel 4 (Common / 50V / 100V)
- 14. CH 1/2 OK: Potential-free optocoupler output, closed when channels 1 and 2 are ok. After switching on, the contact remains open for a few seconds until the protection mode ends and the speaker output is being unlocked.
- 15. CH 3/4 OK: Potential-free optocoupler output, closed when channels 3 and 4 are ok. After switching on, the contact remains open for a few seconds until the protection mode ends and the speaker output is being unlocked.
- 16. AC 230V OK: Potential-free octocoupler output, closed when 230V AC supply is ok.
- 17. DC 24V OK: Potential-free octocoupler output, closed when 24V DC Versorgung is ok.
- 18. +IN1, GND, -IN1: symmetric signal input for chanel 1
- 19. +IN2, GND, -IN2: symmetric signal input for chanel 2
- 20. +IN3, GND, -IN3: symmetric signal input for chanel 3
- 21. +IN4, GND, -IN4: symmetric signal input for chanel 4
- 22. Pilottone: asymmetric signal input for pilot signal chanel 1 and 2
- 23. Pilottone: asymmetric signal input for pilot signal chanel 3 and 4
- 24. +IN 1/2 B, GND, -IN 1/2 B: symmetric signal input for chanel 1/2 Bridge mode
- 25. +IN 3/4 B, GND, -IN 3/4 B: symmetric signal input for chanel 3/4 Bridge mode



- 26. Bridge B Active: Channel 1/2 Bridge mode, if closed
- 27. Bridge B Active: Channel 3/4 Bridge mode, if closed
- 28. Address (optional): Input of device address for serial control command
- 29. Power Delay Link: For cascadeable switch-on delay when using several power amplifiers on one 230V AC supply. The power amplifier with blank jack 1 is switched on first when power is turned on. This device's jack number 2 is to be connected to jack 1 of the next device by means of an RJ45 patch cable and so on. The devices are then switched on one after the other at intervals of approx. 2 seconds. This prevents the starting current inrush from triggering the in-line fuse upstream.
- 29A. RS-486 (Optional): For remote activation and monitoring of the device via the serial interface
- 30. Amp ON (Optional): optocoupler input to remote activation with potential-free external voltage



# DIGIPOWER 4x150T/02 - SPECIFICATIONS



TYPE	4x150T/02
Output Power (RMS) @ 24 VDC (20 Ohm 100 V)	4 x 150 W
THD + N	< 0,29 %
Input sensitivity 90Hz - 20 kHz	1V eff
Input Impedance	10 kOhm
Signal-to-Noise Ratio @ 1 kHz, 250 W, Vol 0.5	85 dB
Output transformer	50 V / 100 V
Current consumption 230 VAC sinus 100V @ 40 Ohms	3.7A
Current consumption 24 VDC sinus 100V @ 40 Ohms	27A
Current consumption Standby 230 VAC	0.045 A
Current consumption Standby 24 VDC	0.16A
Power consumption in standby mode (230 V)	10 W
Power consumption at full load (230 V)	851 W
Inputs	symmetrical on screw terminal
Supply voltage	230 VAC / 24 VDC
Operating temperature	-5° C bis +40° C
Protection circuits	DC, short circuit, resonance, over temperature
Frequency response	80 Hz ÷ 22 kHz / -3 dB
Dimensions	19" / 2 RU (482 mm x 88 mm x 302mm)
Weight	17.1 kg

All Informations without guarantee. Subject to technical changes.



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